UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/596,709 | 06/22/2006 | Nicolas Duflot | BAI525-204/08232 | 9791 |

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| EXAMINER |
|---|
| CASTRO, ALFONSO |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|---|---|---|
| | 10/596,709 | DUFLOT, NICOLAS |
| **Office Action Summary** | Examiner | Art Unit | |
| | ALFONSO CASTRO | 2423 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _22 June 2006_.

2a)☐ This action is **FINAL**.          2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-10_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-10_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _22 June 2006_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

1. Claims 1-10 are pending.

### *Drawings*

2.      The drawings are objected to under 37 CFR 1.83(a) because figures 1-6 fail to show text labels as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 101*

3.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4.      Claim 10 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled "Clarification of 'Processes' under 35 U.S.C. 101"). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. Claim 10 does not specifically recite the structural elements pertaining to the series of steps or acts to be performed and the inclusion of "software storage for preserving and retrieving the physical addresses..." does not cure ineligibility. Additionally, mere field-of-use limitation is generally insufficient to render an otherwise ineligible method claim patent-eligible. The machine or transformation must impose meaningful limits on the method's claim's scope to pass the test. Additionally, insignificant extra-solution activity will not transform an unpatentable principle into a patentable process. This means reciting a specific machine or a particular transformation of a specific article in an insignificant step such as software storage is not sufficient to pass the test. Furthermore, the recited elements of claim 10 may be

reasonably interpreted by one of ordinary skill as software alone and is rejected as failing to fall within a statutory category.

### *Claim Rejections - 35 USC § 112*

5.  Claim 26 is rejected under 35 USC §112 sixth paragraph. In claim 26, applicant appears to be invoking 112 sixth paragraph for the elements "storage means comprising...", "means for connection...", "control means...", and "software storage means". The specification does not recite the structure, material, or acts in support thereof that would perform the function. Claim 26 is directed to a "content substitution encoder". One of ordinary skill in the art would not be apprised of what structures are intended to be encompassed by the claim[s]. Nor would it be clear what the structures are intended to accomplish. Additionally, the main element of "storage means" in the electronic arts is modified by sufficient structure or material for achieving the specified function and therefore raises the rebuttable presumption that claim limitations are not in means-plus-function form and thus are not to be interpreted according to 35 USC 112, sixth paragraph.

Appropriate correction is required in response to this office action.

### *Claim Rejections - 35 USC § 103*

6.     The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.     Claim 1, 3-4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ladd et al., PG Pub 2005/0114900 (hereafter Ladd) in view of Frank et al., PG Pub

2006/0126666 (hereafter Frank).

8.     Regarding claim 1, "a device, referred to as set-top box, comprising: means for

receiving audio/video data transmitted via a communication medium, at least one

application using said received audio/video data and necessitating their storage prior to

their use, the application comprising means for issuing requests for storage/retrieval of

the received data" reads on Ladd (page 3 [0022-0023]).  Ladd does not specifically

reference the term "application using said received audio/video data".  Frank teaches

the missing limitation of Ladd (page 3 [0029-0032]; page 4 [0078-0082]—partitions on a

storage device; page 10 [0147-0150]—identifying storage needs; page 11 [0153-0158]--

corresponds to predetermined storage criteria and storage needs).  Therefore, it would

have been obvious to one of ordinary skill in the art at the time the invention was made

to modify a set top box for comprising storage devices for storing received audio/video

multimedia as known in the art by receiving requests to allocate or retrieve stored data

based on stored applications as taught by Frank because the combination of references results in a product that is more desirable and more efficient.

Regarding "means for connection to at least one peripheral storage unit which is capable of physically storing audio/video data, means for detecting peripheral equipment co-operating with said connection means for detecting the presence of peripheral storage units as from their connection/disconnection to/from the set-top box" reads on Ladd (page 3 [0022-0023] & page 4 [0037]--discussing smart storage devices which can identify themselves when plugged into the host and a person skilled in the art would have understood as reading on applicant's limitation)

Regarding "control means co-operating with the detection means for receiving said requests for storage/retrieval of data issued by the application and for controlling the assignment of physical storage addresses in the different peripheral storage units which are present, software storage means co-operating with said control means for preserving and retrieving the physical addresses of the data stored in the different peripheral storage units" Ladd teaches (page 3 [0022-0023]; page 4 [0037]--discussing smart storage devices (i.e. DVR, PVR, DVI) and a person skilled in the art would have understood Ladd's teaching as once storage devices are detected then said devices can be controlled to store and retrieve data). Ladd does not specifically reference "controlling the assignment of physical storage addresses in the different peripheral storage units which are present, software storage means co-operating with said control means for preserving and retrieving the physical addresses of the data stored in the different peripheral storage units". In an analogous art, Frank teaches the missing

limitation of Ladd (page 3 [0029-0032] & page 4 [0078-0082]—a person skilled in the art would have understood Frank's implicitly teaching a module for preserving and retrieving the physical addresses of data because Frank teaches disaggregation, spanning, mirroring, and storing split-ID packets for which data is allocated in different devices hence requiring said module). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a means for detecting storage devices by receiving requests to allocate storage on more or more of the storage devices and supporting the actual physical structure of storage devices in a multi-segment addressing and recording the location when storing data on multiple storage devices as taught by Frank because the combination of references results in a product that is more desirable and more efficient.

9.      Regarding claim 3, "wherein the control means comprise a manager for updating said software storage means as a function of the requests for storage/retrieval of the data and of the peripheral storage units which are present or are detected at the instant of the requests" Ladd teaches (page 1 [0011]). One of the ways in which the subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the claims. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a system for detecting storage devices by further updating software in order to avoid situations where the hardware/software environment of the CPE functions properly as taught by Ladd because the combination of references results in a product or process that is more desirable and more efficient.

10.    Regarding claim 4, "wherein the control means comprise interface means with the application for receiving and interpreting the storage/retrieval requests in terms of repartitioning the data stored in the different peripheral units as a function of predetermined storage criteria" the control means is discussed in claim 1 above. Ladd further teaches all the elements of this limitation except "receiving and interpreting the storage/retrieval requests in terms of repartitioning the data stored in the different peripheral units as a function of predetermined storage criteria"(page 4 [0037]). Frank teaches (page 3 [0029-0032]; page 4 [0078-0082]; page 11 [0153-0158]--corresponds to predetermined storage criteria). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a system comprising means for detecting storage devices by receiving requests to allocate storage on more or more of the storage devices and repartitioning the data stored on numerous storage devices while taking into consideration storage criteria as taught by Frank because the combination of references results in a product that is more desirable and more efficient.

11.    Regarding claim 7, "wherein the control means comprise interface means with the application for receiving and interpreting the storage/retrieval requests in terms of repartitioning the data stored in the different peripheral units as a function of application needs" is discussed in claim 1 above except "receiving and interpreting the storage/retrieval requests in terms of repartitioning the data stored in the different peripheral units as a function of application needs" (Ladd page 4 [0037]).    Frank

teaches (page 3 [0029-0032]; page 4 [0078-0082]—partitions on a storage device; page 10 [0147-0150]—identifying storage needs; page 11 [0153-0158]--corresponds to predetermined storage criteria and storage needs). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a system comprising means for detecting storage devices by receiving requests to allocate storage on more or more of the storage devices and repartitioning the data stored on numerous storage devices while taking into consideration storage criteria as taught by Frank because the combination of references results in a product that is more desirable and more efficient.

12.    Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ladd et al., PG Pub 2005/0114900 (hereafter Ladd), Frank et al., PG Pub 2006/0126666 (hereafter Frank), in view of Salmonsen et al., PG Pub 2004/0054689 (hereafter Salmonsen).

13.    Regarding claim 2, "wherein the software storage means comprise a mapping table which is updated by said control means comprising the virtual addresses of the data to be stored for assigning a physical storage address to them, corresponding to a memory space reserved in a peripheral storage unit" Frank teaches (page 3 [0026-0030]- control means used in combination with storage means). Frank does not specifically reference "mapping table which is updated by said control means comprising the virtual addresses of the data to be stored for assigning a physical storage address to them, corresponding to a memory space reserved in a peripheral

storage unit". In an analogous art, Salmonsen teaches (page 10 [0107]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a system comprising a control means used in combination with a storage means for controlling storage devices by accessing virtual logical block addresses and relating the virtual logical block addresses to physical storage addresses because the combination of references results in a product that is more desirable and more efficient and enables access to control from a variety of different content storage sources.

14.     Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ladd et al., PG Pub 2005/0114900 (hereafter Ladd), Frank et al., PG Pub 2006/0126666 (hereafter Frank), in view of Dalal et al., PG Pub 2004/0123063 (hereafter Dalal).

15.     Regarding claim 5, "wherein at least one predetermined criterion is related to the rate at which the audio/video data must be stored/retrieved" is discussed in claim 4 except "criterion is related to the rate at which the audio/video data must be stored/retrieved". In an analogous art, Dalal teaches a system for determining whether storage capabilities exist on available storage devices (page 3 [0028]; page 12 [0185-0187]—partitioning storage); page 13 [0208-0213] & page 14 [0216-0217]—input output rate taken into consideration in a system comprising a logical volume or a virtual disk device that can be one or more physical storage devices). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

modify a system comprising means for detecting storage devices by receiving requests to allocate storage on more or more of the storage devices and repartitioning the data stored on numerous storage devices while taking into consideration storage criteria as taught by Frank and further take into consideration the input/output rate of the storage devices as taught by Dalal because the combination of references results in a product that is more desirable and more efficient.

16.     Regarding claim 8, "wherein the interface means comprise a list of services allowing communication with the application with a view to determining a preferred storage method to be used for said application" is discussed in claim 7 above except "list of services allowing communication with the application with a view to determining a preferred storage method to be used for said application".  In an analogous art, Dalal teaches the limitation not specifically referenced by Ladd and Frank (page 5 [0084-0085]).  Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a device comprising an interface and modules for detecting connected storage devices by receiving requests to allocate storage on more or more of the storage devices by incorporating a system for storage allocation services for application requirements as taught by Dalal because the combination of references results in a product that is more desirable and more efficient.

17.     Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ladd et

al., PG Pub 2005/0114900 (hereafter Ladd), Frank et al., PG Pub 2006/0126666

(hereafter Frank), in view of Guu et al., PG Pub 2003/0225960 (hereafter Guu).


18.     Regarding claim 6, "wherein at least one predetermined criterion is related to the

security of the stored audio/video data" is discussed in the limitation of claim 4 except

for "criterion is related to the security of the stored audio/video data".  In an analogous

art, Guu teaches "criterion is related to the security of the stored audio/video data"

(Abstract; page 1 [0008] & [0015]; page 2 [0024-0034]).  Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify a

system comprising means for detecting storage devices by receiving requests to

allocate storage on more or more of the storage devices and repartitioning the data

stored on numerous storage devices while taking into consideration storage criteria as

taught by Frank and further partition the security device while taking into consideration

the security functions of the data to be accessed as taught by Guu because the

combination of references results in a product that is more desirable and more efficient.

### Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

19.     Claims 9 and 10 are rejected under 35 U.S.C. 102(e) as being unpatentable over

Ladd et al., PG Pub 2005/0114900 (hereafter Ladd).

20.     Regarding claim 9, "a device, referred to as set-top box, comprising: means for

receiving audio/video data transmitted via a communication medium, at least one

application using said received audio/video data and necessitating their storage prior to

their use, the application comprising means for issuing requests for storage/retrieval of

the received data" reads on Ladd (page 3 [0022-0023]—set top box, implicitly teaches

means for receiving audio/video data transmitted via a communication medium,

connected to storage device and a person skilled in the art would have understood

Ladd's teachings comprising software and hardware for storing/retrieving received

data).

        "means for connection to at least one peripheral storage unit which is capable of

physically storing audio/video data" reads on Ladd (page 3 [0022-0023] & page 4

[0037]--discussing smart storage devices connected to host).

21.    Regarding claim 10, A storage method comprising the steps of: detecting peripheral equipment for detecting the presence of peripheral storage units as from their connection/disconnection to/from a set-top box, receiving a request for storage/retrieval of audio/video data issued by an application using said audio/video data and necessitating their storage prior to their use, controlling the assignment of physical storage addresses in the different peripheral storage units that are detected, and software storage for preserving and retrieving the physical addresses of the data stored in the different peripheral storage units" is rejected in accordance with claim 1 because the method is met by the disclosure of the apparatus and methods of the reference(s) as discussed in claim 1 above, and because the steps of the method are easily converted into steps performed by a computer program product by one skilled in the art.

## Conclusion

22.    The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

        a.     Armstrong et al., US 7,308,530—applies to claim 2 regarding mapping logical addresses to physical addresses.

        b.     Mogi et al., PG Pub 2003/0093442—applies to claim 2 regarding the mapping logical addresses to physical addresses and claim 5 regarding rate at which the audio/video data must be stored/retrieved.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALFONSO CASTRO whose telephone number is (571)270-3950. The examiner can normally be reached on Monday thru Friday (8am to 5pm EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Koenig can be reached on 571-272-7296. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. C./
Examiner, Art Unit 2423

/Andrew Y Koenig/
Supervisory Patent Examiner, Art Unit 2423